



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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July 15, 2011

11-NWP-073

Mr. Matthew McCormick Manager
Richland Operations Office
United States Department of Energy
PO Box 550, MSIN: A7-50
Richland, Washington 98352

Re: The White Bluffs Substation

Dear Mr. McCormick,

The White Bluffs Substation is operated by the Bonneville Power Administration (BPA) under a permit with the United States Department of Energy (USDOE). The White Bluff Substation is currently listed as active in Hanford's Waste Information Data System (WIDS) under site code 600-61. This is due to the past spills of mineral oil containing polychlorinated bi-phenyls (PCBs) dating back to 1976 and reported in 1990. The Department of Ecology (Ecology) completed a review of BPA work that supported cleanup of the past spills at the White Bluffs Substation.

Ecology performed a field visit on May 12, 2011, and reviewed sample data and the event timeline (Enclosure). The field visit was performed by Brenda Jentzen and Jerry Yokel from Ecology who met with Shawn Barndt (BPA) and Randy Krekel (USDOE).

BPA voluntarily performed excavations in 1990 and 2010. The excavation in 2010 included removal of older above-ground tanks, soil, and concrete footings. Sampling and analysis of soil and concrete footings were done prior to disposal at Pit 9 on the Hanford Site. Ecology reviewed all analytical results. The data show that the hazardous constituents are below the Model Toxics Control Act cleanup standards for the most restrictive value of soil protective of groundwater (Washington Administrative Code 173-340-747). Therefore, this WIDS site (600-61) requires no further action.

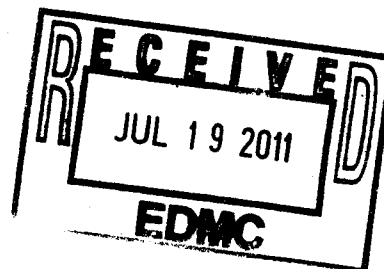
If you have any question please contact Brenda Jentzen at 372-7912.

Sincerely,

A handwritten signature in black ink that reads "John B. Price".

John Price
Tri-Party Agreement Section Manager
Nuclear Waste Program

Enclosure
cc: see next page



White Bluffs Substation Historical Spill

The White Bluffs substation is located in the southwest quarter of Section 7, Township 10 North, Range 28 East, Benton County. The substation is located off Horn Rapids Road. It is currently active, with operations beginning on September 13, 1976.

The White Bluffs substation used petroleum oil, primarily mineral oil, as insulation in electrical equipment. Insulating oil was a highly refined, 10-weight petroleum oil with approximately 0.1 percent 2,6-di-tert-butyl-p-cresol (an antioxidant known as BHT that was also used as a food additive) and varying amounts of polychlorinated bi-phenyls (PCBs) to increase dielectric strength. The aboveground tanks contained mineral oil, which was used as make-up oil for equipment maintenance or cleaning.

The soil beneath the switchyard was suspected to have been contaminated with the mineral oil from routine maintenance and previous spills. The contamination was reported in 1990. The following is the timeline showing the sampling, laboratory analysis, and excavation that have occurred at the site. The timeline for this spill follows:

- July 30, 1990 - Oil soaked soil was removed from under the access valve on Oil Storage Tank #2.
- September 12, 1990 - Verification sampling (18 samples taken) of the area the oil soaked soil was removed. Samples were taken at depths ranging from 4 inches to 24 inches.
- October 1, 1990 - Lab report for the 18 samples. Five of the 18 samples analyzed had hits of PCB contamination, ranging from a trace to 0.39 ppm. Analysis of the remaining 13 samples for PCBs showed none detected (ND).
- April 15 1994 - soil samples were taken and analyzed for aroclor 1260 and total petroleum hydrocarbon. Two of three samples for aroclor 1260 were shown as non-detect with one sample showed as minor hit. Two of three total petroleum hydrocarbon samples were above 2000 ppm, which is above cleanup standards.
- January 2010 to March 2010 - BPA construction crews installing a breaker, excavated contaminated soil, concrete footings, and tanks. Excavated material was stockpiled onsite for disposal.
- March 24, 2010 - Samples were collected from the stockpile of soil and concrete footings for disposal profile purposes. Three composite samples (two concrete and one soil) were analyzed for PCB and TPH from the excavated soils. The concrete footings were put into two categories as some were pedestal footings and some were oil storage tank footings. Lab result report for the three samples. The only sample to have any trace of contamination was the concrete sample taken from the oil storage tank footings. The PCB analysis showed the oil storage tank footings had an unquantifiable level of <0.15 ppm of PCB contamination. TPH sample results were below cleanup levels.
- April 5-16, 2010 - All excavated soil, concrete footings, and tanks were disposed of at Pit 9 on the Hanford site after completing a Waste Profile/Shipment Record for Disposal of Inert Waste at Pit 9.

The Department of Ecology has reviewed the analytical results from the above sampling events and performed a site visit on May 12, 2011 to the White Bluff substation. The data show that the hazardous constituents below MTCA cleanup standards for the most restrictive value (soil protective of groundwater). Therefore, this site requires no further action.